REMARKS

Claims 1-54 are pending. Claims 38-54 are withdrawn from consideration, and remaining claims 1-37 stand rejected. Applicants respectfully request reconsideration of the present application in view of the amendments set forth above and the remarks below.

Amendments to the Claims

Applicants amend claim 1 to include some of the subject matter formerly present in claim 2, and claim 26 has been amended to include some of the subject matter formerly present in claim 27. Claims 36 and 37 are amended to replace "electret filter media," as recited in the preamble, with "respirator." Claim 54 is amended to include a period which was inadvertently omitted from the claim.

No new matter is added.

Drawings

The Examiner requests that Applicants submit drawings showing the respirator including a filtration element and the filtration media with its constituent layers. Applicants respectfully disagree with the Examiner's request for drawings, and submit that drawings are not necessary.

35 U.S.C. §113, first sentence, states that an "applicant shall furnish a drawing where necessary for the understanding of the subject matter sought to be patented." M.P.E.P 601.01(f) further states that drawings are not considered necessary for the understanding of the invention "where the invention resides solely in coating or impregnating a conventional sheet (e.g., paper or cloth, or an article of known and conventional character with a particular composition) . . . ." Accordingly, since the present invention is directed to conventional filter media and respirators having a filter element with a vapor phase deposition *coating* thereon, drawings are not necessary for the understanding of the invention. Reconsideration and withdrawal of this requirement is therefore respectfully requested.

Claim Objections

The Examiner objects to claims 36 and 37 because the preamble recites "the electret filter media," whereas the parent claims are directed to respirators. Applicants amend claims 36 and 37 to correct these errors, thereby obviating the basis for this rejection.

Election/Restriction

Applicants respectfully request reconsideration of the restriction requirement of the claims to the following groups: (1) claims 1-37 and (2) claims 38-54. In the pending Office Action, the Examiner states that "the electret filter media and respirator recited in claims 1-37 can be made by a process unrelated to vapor deposition, such as spray coating or dipping. Accordingly, the inventions are distinct." (May 23, 2003 Office Action, page 2.) Applicants amend the independent claims to require the filter media to include a polymer coating formed by vapor deposition. Accordingly, claims 1-37 are not distinct from claims 38-54, and therefore reconsideration and withdrawal of the restriction requirement is respectfully requested.

Rejection Pursuant to 35 U.S.C. §102(b)/103(a)

Claims 1-15, 26, and 32-37 are rejected pursuant to 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,645,627 of Lifshutz et al. (Lifshutz), and claims 26 and 31-37 are rejected pursuant to 35 U.S.C. § 102(a) as being anticipated by WO 00/78430 (the '430 Patent). The Examiner argues that Lifshutz discloses a filter media substantially as claimed, and that the '430 Patent discloses respirators having a filter element including a melt blown electret polymer fiber web with all of the recited features. The Examiner also rejects claims 2-5 and 17-25 pursuant to 35 U.S.C. § 103(b) as being obvious over Lifshutz in view of a publication entitled "Barrier Properties of Plasma and Chemically Fluorinated Polypropylene and Polyethylenterephthalate" by Friedrich et al. (Friedrich). Applicants respectfully disagree with the Examiner's rejections.

At the outset, none of the cited references, taken alone or combined, teach or even

suggest a *vapor phase deposition* treated electret polymer fiber web, or a respirator containing such a filter media. Both Lifshutz and the '430 Patent are limited to a filter media having a charge stabilizing additive present *within* the web. The additive is mixed with the polymer resin to form polymer pellets which are then extruded into fibers to form a fiber web. (The '430 Patent, Page 9, lines 16-20.) Accordingly, neither Lifshutz nor the '430 Patent teach or even suggest a *vapor phase deposition coating* on an electret polymer fiber web.

Likewise, the cited publication is limited to a *plasma* treated filter media. Plasma treatments are conducted in a vacuum, and are used to *modify* the surface of a substrate, such as a polymer fiber web, with a *plasma*. The plasma is formed by placing a chemical gas under vacuum in a chamber containing the substrate. The vacuum pressure ionizes the gas to form free radicals which react with the polymer fiber web to *alter* the surface chemistry of the web.

During vapor phase deposition, on the other hand as taught by the present invention, a monomer is evaporated into a vacuum chamber and *condenses* onto the surface of a fiber web to *coat* the fibers. The monomer is cured by exposing the treated web to an energy source, which causes the monomer species to polymerize. As a result, a substantially uniform coating is formed on the fiber web. The monomer does not form a plasma, it does not react with the fiber web, and it does not alter the surface chemistry of the web.

Accordingly, none of the cited references teach or even suggest a vapor phase deposition treated polymer fiber web.

In the pending Office Action, the Examiner further argues that:

> the method of forming an article is not germane to the issue of patentability of the article itself. '[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.'

(May 23, 2003 Office Action, Page 7.)

Applicants submit that an electret filter media having a vapor phase deposition treated coating disposed thereon, e.g., the product, is not the same as, nor is it obvious from the teachings of Lifshutz, the '430 Patent, and/or the cited publication. The products taught and claimed in the present invention have excellent filtration efficiency, and in particular they have a very low alpha decay. Conventional electret filter media tend to lose their charge after filtering certain contaminants for relatively short time periods. The result is a marked decrease in filter performance over a relatively short period of time (e.g., less than 20 minutes). The Applicants have found that an electret filter media having a *vapor phase deposition coating* disposed thereon shows a significant improvement over prior art filter media.

Applicants refer the Examiner to the examples set forth in the specification which illustrate this improvement. As shown on page 15, Applicants compared a vapor phase deposition treated electret filter media (Example 1) to a plasma treated electret filter media (Comparative Example A) and an electret filter media having a charge stabilizing additive present within the web (Comparative Example B). As shown in Table 2, Applicants' filter media (Example 1) had a much higher filtration efficiency, starting at an Alpha value of 21.35, while Comparative Example A had an Alpha value of 6.60 and Comparative Example B had an Alpha value of 18.56. Applicants' filter media also retained its Alpha value throughout DOP load testing, dropping to an Alpha of 17.08 after 230 mg of DOP load. Comparative Example A showed a decrease in Alpha after 230 mg of DOP load to 4.88, and Comparative Example B showed a significant decrease in Alpha after 230 mg of DOP load to 3.71.

Accordingly, Applicants' vapor phase deposition treated electret filter media product is not the same as the filter media taught by Lifshutz, the '430 Patent, and the cited publication. Applicants further submit that the filter media and respirator recited in the claims of the present invention are not obvious over the prior art, as none of the references teach or even suggest using any type of vapor phase deposition process to coat a filter media.

Applicants have provided a novel and non-obvious filter media, respirator, and methods for making the same, that offers several advantages over the prior art filters. Accordingly,

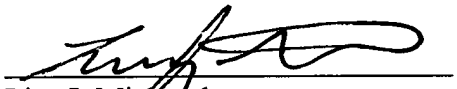
claims 1-54 distinguish over the cited references and represent allowable subject matter.

Conclusion

In view of the amendments and remarks above, Applicants submit that claims 1-54 are in condition for allowance. In the event that the above amendments and remarks are not deemed to place this case in condition for allowance, an opportunity to interview with the Examiner is requested. Applicants encourage the Examiner to telephone the undersigned upon receipt of this response to discuss any issues that may remain.

Respectfully submitted,

Date: July 3, 2003



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